



# Recombinant Protein Technical Manual

## Recombinant Human Carbonic Anhydrase 10/CA10 Protein (Active)

RPES3399

### Product Data:

**Product SKU:** RPES3399

**Size:** 10µg

**Species:** Human

**Expression host:** HEK293 Cells

**Uniprot:** NP\_001076002.1

### Protein Information:

**Molecular Mass:** 27.2 kDa

**AP Molecular Mass:** 38 kDa

#### Tag:

**Bio-activity:** Measured by its esterase activity. The specific activity is >100 pmoles/min/µg, as measured with 1 mM 4-Nitrophenyl acetate and 1 µg enzyme at 400 nm in 100 µL of 12.5 mM Tris, 75 mM NaCl, pH 7.5.

**Purity:** > 95 % as determined by reducing SDS-PAGE.

**Endotoxin:** < 1.0 EU per µg as determined by the LAL method.

**Storage:** Lyophilized proteins are stable for up to 12 months when stored at -20 to -80°C. Reconstituted protein solution can be stored at 4-8°C for 2-7 days. Aliquots of reconstituted samples are stable at < -20°C for 3 months.

**Shipping:** This product is provided as lyophilized powder which is shipped with ice packs.

**Formulation:** Lyophilized from sterile 100mM Glycine, 10mM NaCl, 50mM Tris, pH 7.5

**Reconstitution:** Please refer to the printed manual for detailed information.

#### Application:

**Synonyms:** Carbonic Anhydrase-Related Protein 10; Carbonic Anhydrase-Related Protein X; CA-RP X; CARP X; Cerebral Protein 15; CA10;CA-RPX;CARPX;HUCEP5

## Immunogen Information:

**Sequence:** Met 1-Asn 300

## Background:

Carbonic anhydrase X, also called carbonic anhydrase - related protein X (CARPX) and CA10, belongs to the CA family of zinc metalloenzymes which catalyze the reversible hydration of carbon dioxide in various biological processes such as respiration, renal tubular acidification and bone resorption. The secreted protein CARPX without CA activity (hydration of CO<sub>2</sub>) is identified as an acatalytic member of the alpha-carbonic anhydrase subgroup. CARP X expression is detected in the adult total brain and almost all parts of the central nervous system, but not in the fetal brain. Accordingly, CARP X is suggested to play a role in the development of central nervous system, especially the brain. The same CARP X protein are encoded by multiple transcript variants of this gene.